

sionally the gooseberry. Where the perforated stems do not break off, indications of the presence of the borers may often be found in the sickly look of the leaves, and inferior size of the fruit; sometimes, indeed, so badly affected are they, that both fruit and leaves wither and die.

To lessen their numbers and check their increase, efforts should be made to destroy as many of the moths as possible in their season, and when pruning the bushes in the spring all canes found to be hollow should be cut out and burnt. Dr. Fitch, in his third report, says on this point, "The utter carelessness with which the currant is treated in most of our gardens, with a thicket of young shoots annually left unpruned, and crowding upon and smothering each other, gives these borers and other pernicious insects the utmost facilities for working unmolested, and pursuing their devastating work without interruption. Were this shrub suitably trimmed and kept thinned out to only three or four stalks from each root, these stalks, growing freely exposed to the light and air, would be little infested by these depredating insects."

No. 11. THE AMERICAN CURRANT BORER. (*Psenocerus supernotatus*, Say).

This species was first described by Thomas Say, one of the fathers of entomology in America, in a communication made to the Academy of Natural Sciences, Philadelphia, in 1823; he found it in Missouri. Although not abundant in Ontario yet it is found occasionally, and is deserving of notice. In the larva state, this insect is similar in its habits to the preceding species, but may then be distinguished by its lesser size, and its being destitute of feet. In the perfect state it is a small brown beetle, whereas the last mentioned was a wasp-like moth. In the *Practical Entomologist*, p. 22. Mr. Walsh thus describes this pest: "The larva of this insect is a small, cylindrical, white, footless grub, with the head brown and the jaws black. It feeds upon the pith of the stalks, and therefore killing them; it passes its pupa state in the stalks, and in the latter part of May, or beginning of June, changes to a small, narrow, cylindrical, brownish beetle, darker behind the middle, with a whitish dot a little before the middle of each wing-case, and a large, slightly oblique mark of the same colour just behind the middle; the horns, or antennae, are slender, and nearly as long as the body."

Dr. Fitch referring to this insect in his third report says "In all our gardens numbers of the currant stalks perish every season. To such an extent does this mortality prevail that this fruit would soon disappear from our country were it not that the roots of this shrub are so vigorous sending up a multitude of new shoots every year whereby the places of those that perish are constantly re-supplied."

"After the leaves have fallen in the autumn and during the winter, these dead stalks are readily distinguished from the live ones by being dotted over with a pretty little fungus the size of a pin head, and of a pale bright red colour and corky texture."

This beetle is a day-flying insect also, but much less active and hence more easily captured than the preceding species. It may be found in its season on flowers, and the method already recommended of cutting out and burning the infested canes may be adopted in this instance also with great advantage.

AFFECTING THE FRUIT.

No. 12. THE GOOSEBERRY FRUIT WORM. (*Pempelia grossulariæ*, Packard.)

The first notice of this insect as a species injurious to the gooseberry was given by Dr. Fitch in his third report in which he calls the larva, "the caterpillar of the gooseberry moth." He had not, however, raised it to the perfect state and knew nothing of the appearance of the moth or of its habits. We may safely claim the credit ourselves of being the first to work out its history which we did in 1865; and it was from some of the specimens then reared that Dr. Packard's description and figure given in his work were taken, see *Packard's Guide to the Study of Insects*, p. 321.

FIG. 40.



The accompanying figure 40 well represents the moth with the cocoon along side of it. The fore wings are pale gray with dark streaks and bands. There is a transverse diffuse band a short distance from the base of the wing enclosing an irregular whitish line which terminates before reaching the front edge of the wing. Near the outer edge of the wing is another transverse band enclosing a

whitish zig-zag line. The veins of the hind wings are also whitish.

This insect is a common pest of the gooseberry. The female moth lays her eggs in the ground, and the young seek their food in the soil. These eggs are hatched, and the larvae are lodged. The threads, now drawn into a fine web. This is its body, and it is found in the buds of the gooseberry. The means of a cure are times accumulated.

When the body thickens, it is small, pale, and shining green, with a reddish hue. The larvae are found in the buds, and the thickening of the buds is the 15th to 20th of the cocoon among them. In a small bud, one brood of larvae is found.

The fruit is not sufficient to sustain the larvae.

We have seen neither does it appear in any instances that it is fastening on the fruit, and fastening on the fruit.

Remedies for picking, and for berries found in the indication of watchfulness. The quarter, for seen upward.

We have seen the appearance of the fruit to avoid in the ground. This is a remedy should be found for this insect, but of St. Louis, bushes after such chrysalis.

No.

Dr. Asa affecting the gooseberry that some of the